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TEL. (212) 688-0500

Deutsch, Shea & Evans
High Technology Recruitment Index

November, 1981

3 Month running average

Current single month X

Baseline

1961 = 100; seasonally adjusted

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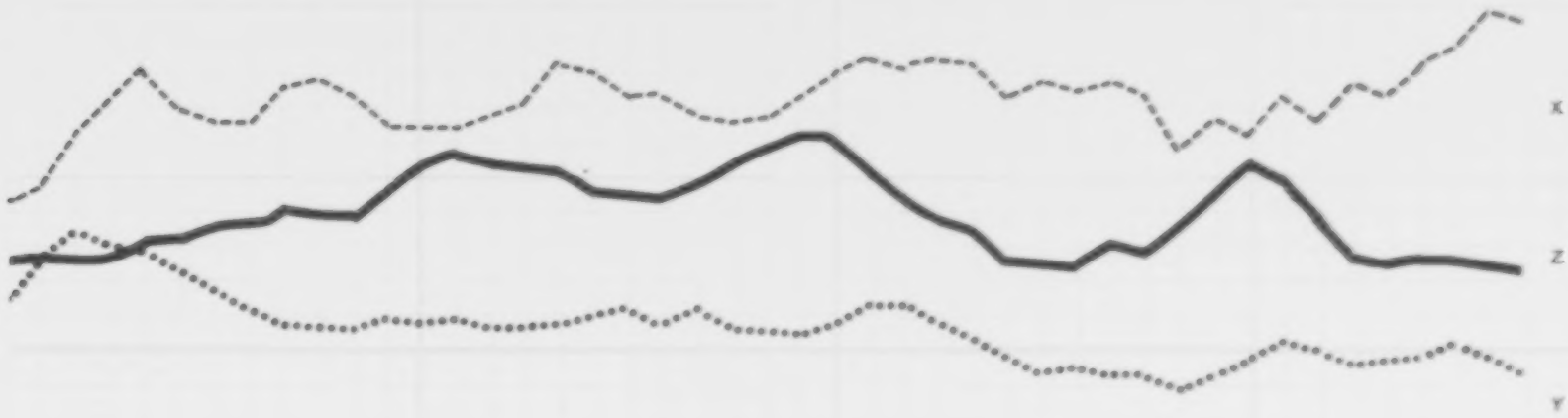
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	•••••	Y
Journal	———	Z
Baseline:		

1961 = 100; seasonally adjusted

HTRI Monthly Commentary

Four Point September Drop Portends Sharp Dip In HTRI For Last Quarter

As predicted in the previous month's report, the three-month upturn in technical demand has come to an end, with the High Technology Recruitment Index moving downward in September to 137.

"This month we see what looks at first like a small decline of four points in the three-month running average," says Professor Derek deSolla Price of Yale University, DS&E's consultant on the Index. "When seen in detail, however, the picture presented is far from trivial. For September, both the Journal and the Newspaper Classified Subindexes show continuing decline and weakness from a level that is already below the peaks reached during the past year or so. The three-month running average for classified is at its lowest level of the year, the journal figure continues a year-long downward movement, and the Newspaper Display Index, which reached a record high of 199 in August and which we expected to top the 200 mark, has instead turned downward as well. Any time all three of our component subindexes decline in concert, it is ominous."

Further support for a decline comes from the single-month figures for October. Display advertising, in particular, records a 36-point drop from the September single-month level; classified is down nine points; only the journal figure—up ten points—presents a positive note. Thus, the three-month running average for October seems very likely to show a further drop.

"The downturn in the Newspaper Display Index is especially significant," Professor Price says, "since if this trend continues, it will lead to a 20-30 point decline in the running average for this subindex alone. It looks as if the HTRI might drop below 130 by year end, as it did briefly toward the end of 1980, when the November Index dropped to 128. Though HTRI remains at a remarkably high level, some falling away seems to be commencing. Perhaps it is surprising that the behavior of high technology industry has been so resilient against the flood tide of declining economic indicators and recessionary forces."

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jan '81	138	98	162	155
Feb	142	101	174	151
Mar	136	100	167	140
Apr	135	97	178	129
May	132	98	173	125
Jun	135	99	181	126
Jul	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128*	85*	170*	128*
Nov				
Dec				

*indicates single month figures; all others are three-month running averages.

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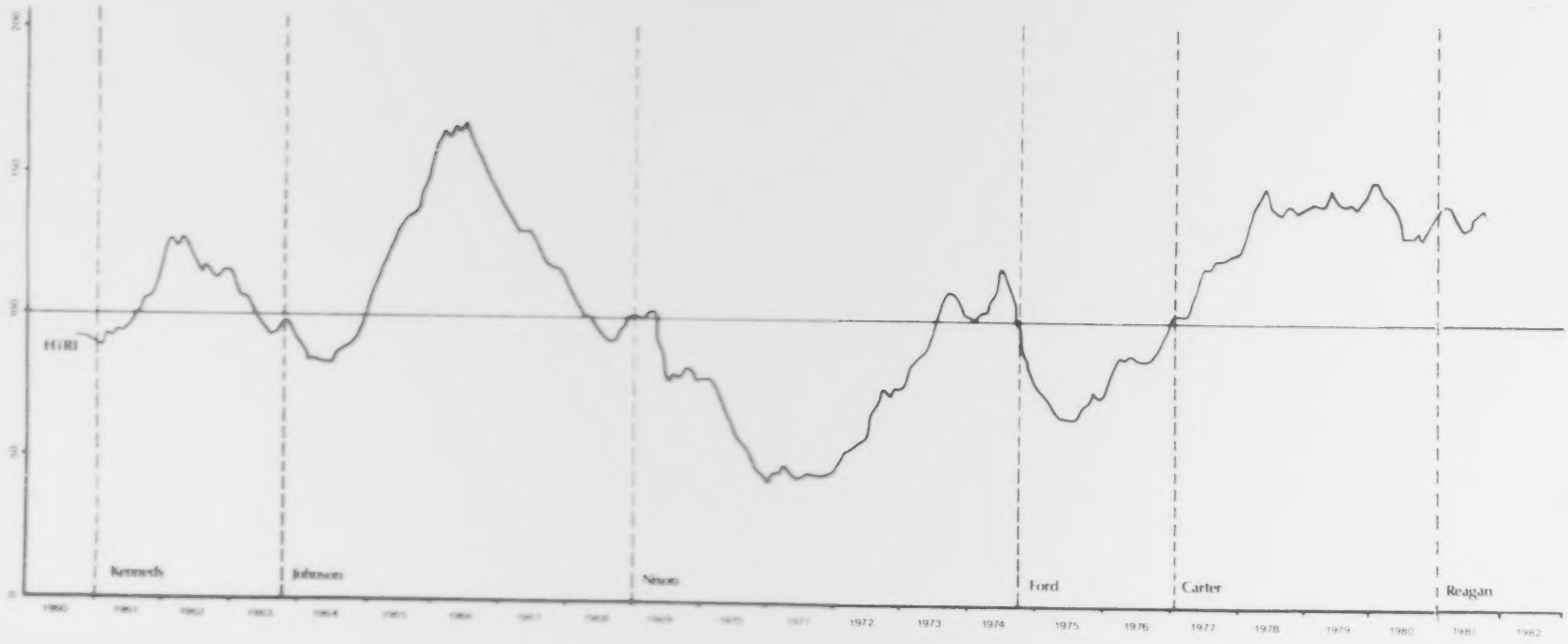
High Technology Recruitment Index



(Seasonally Adjusted; Base 1961 = 100)

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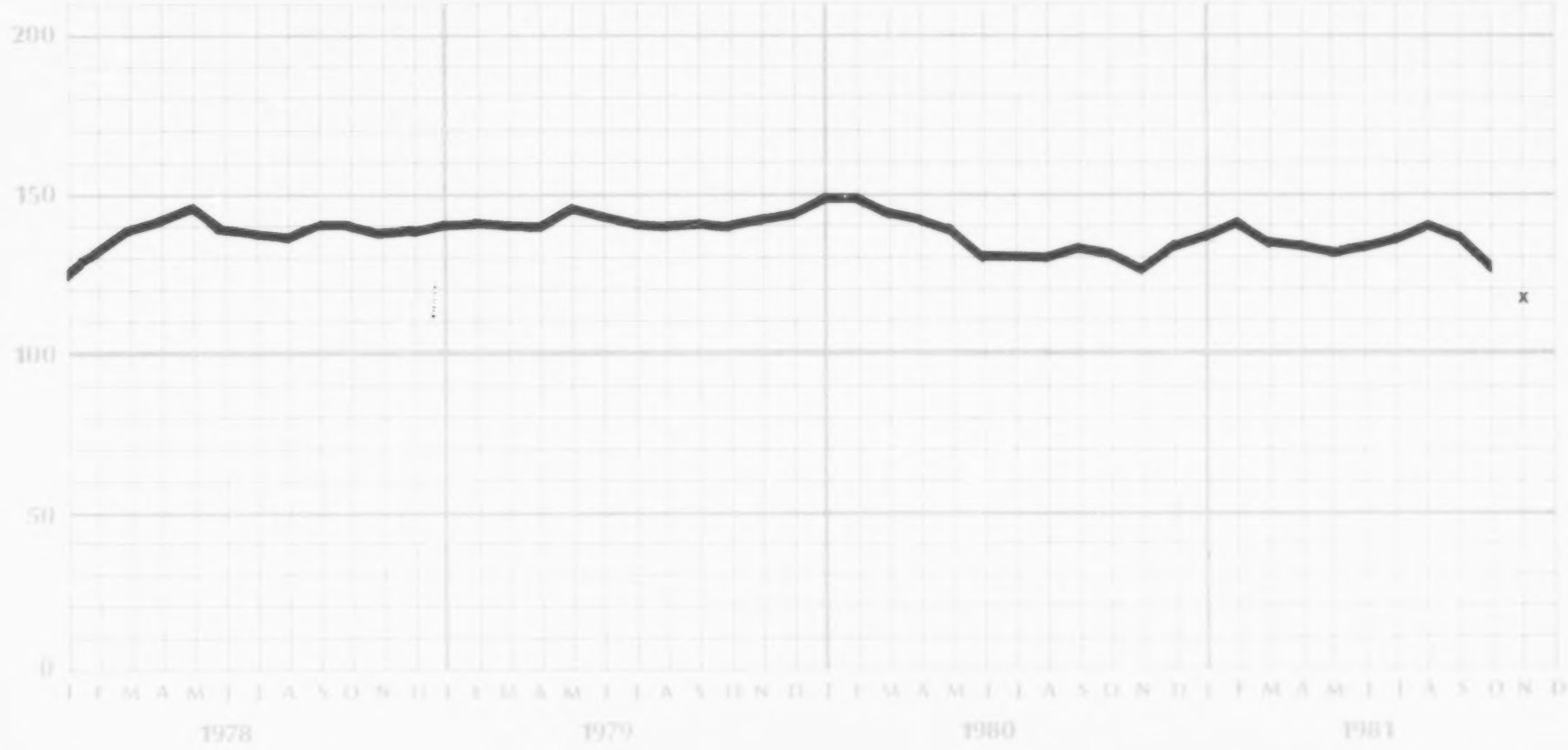
Deutsch, Shea & Evans High Technology Recruitment Index

December, 1981



3 Month running average
Current single month X
Baseline
1961 = 100; seasonally adjusted

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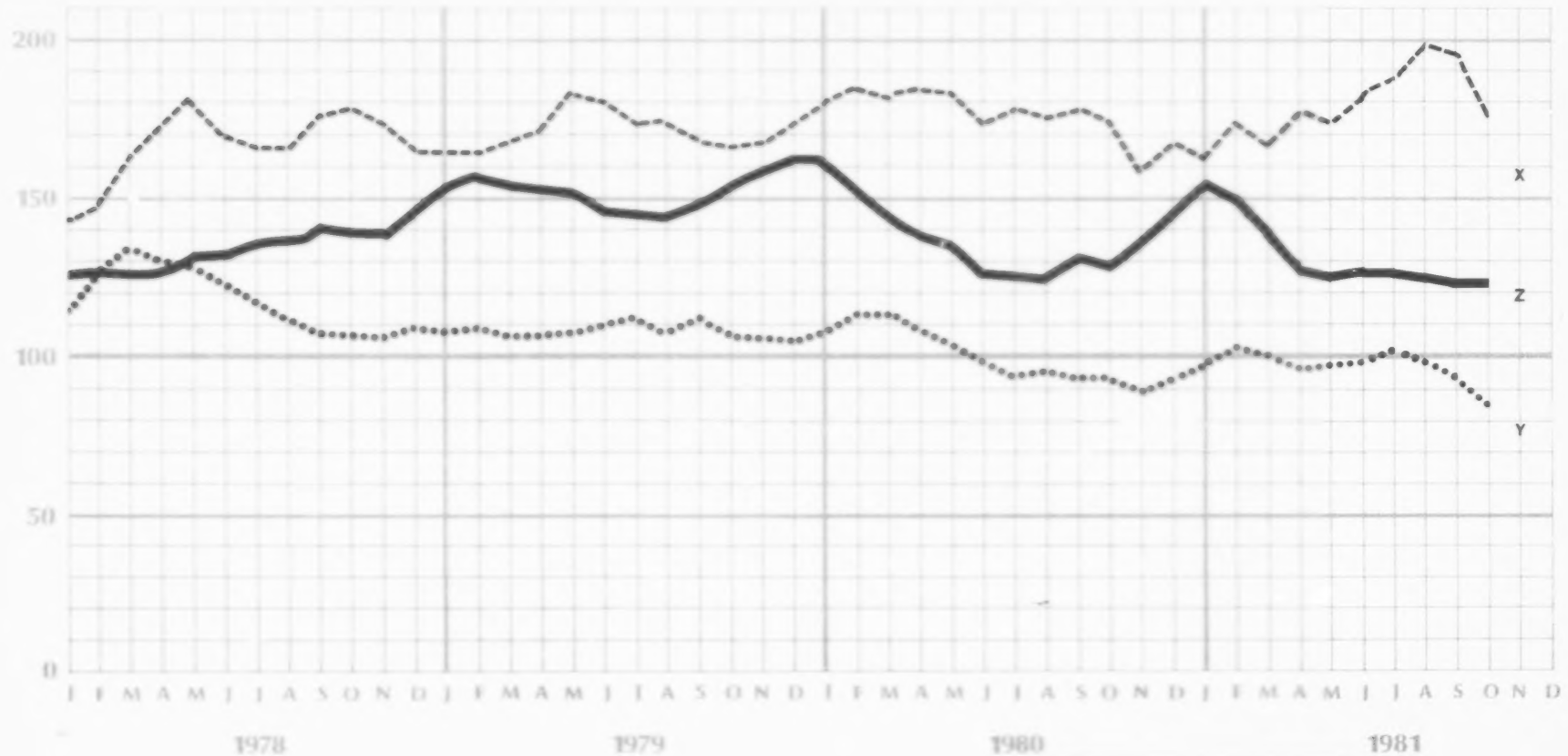
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	·····	Y
Journal	▬▬	Z
Baseline:	———	

1961 = 100; seasonally adjusted

HTRI Monthly Commentary

A Decline Of Nine Points Brings The October High Technology Recruitment Index To 128

Continuing its downward movement, the High Technology Recruitment Index registered a significant drop in demand for engineering and scientific professionals in October.

The three-month running average of the Index declined nine points from its September level of 137 to stand at 128 in October. This is four points below the October 1980 Index level and (along with November, 1980) is the lowest value the Index has shown since January, 1978's 127 figure. While there was some year-end upward movement after the Index reached 128 in 1980, a further drop in technical recruitment activity is expected for the remainder of 1981.

This is forecast because the Journal Subindex continues its mild decline of one point per month while both indexes of newspaper recruitment advertising are off very heavily. Display recruitment advertising for technical people, which recently peaked just short of a running average of 200, is now at 178 for October—approximately its general level over the preceding three years. Classified has an October running average of 85, a five-year low.

The single-month figures for November show another significant decline in prospect. The overall figure is 118, the lowest in four years, and the single-month data for the subindexes are down accordingly.

"With all three subindexes in consensus on a sustained decline," says Professor Derek de Solla Price of Yale University, DS&E's consultant on the Index, "we must make a prognosis of a five to ten point decline in each of the next two months, bringing the HTRI down to about 115 by year's end. The behavior of the Journal Subindex, however, usually leading the newspaper indicators by several months, gives some hope that the decline in demand for engineers and scientists might moderate after the new year and stabilize the Index at a level still significantly above par."

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jan '81	138	98	162	155
Feb	142	101	174	151
Mar	136	100	167	140
Apr	135	97	178	129
May	132	98	173	125
Jun	135	99	181	126
Jul	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128	85	178	122
Nov	118*	77*	157*	119*
Dec				

*indicates single month figures; all others are three-month running averages.

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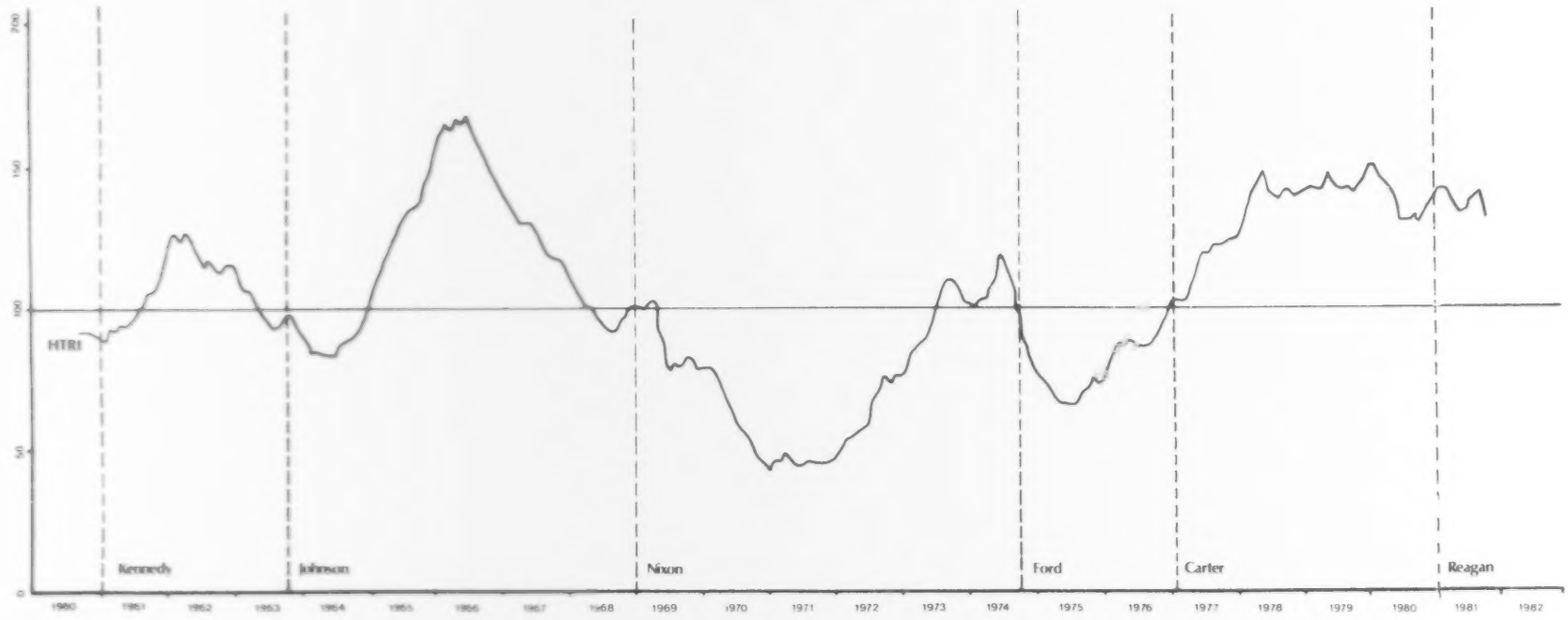
High Technology Recruitment Index



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B2975-1 A

Deutsch, Shea & Evans High Technology Recruitment Index Year End Report

1981: MOVING DOWN

Although 1981 was the fifth highest year in terms of demand for engineers and scientists, as measured by the High Technology Recruitment Index, its most significant development was the further downward drift which occurred. It was not a major drop: at an annual average of 135, 1981 was only three points below the 1980 average. The 1981 pattern like that of 1980, was one of an upward movement in the first months of the year followed by a generally downward monthly trend thereafter. However, where the movement in 1980 was from a level of 150 to fourth quarter levels in the 130s, for 1981 the decline was from the 140 region into the 120s.

1981, in brief, saw technical demand continuing above average throughout the year, but the dimensions of this demand contracted steadily.

What of 1982?

"We have had about four years of the High Technology Recruitment Index oscillating around the 140 mark," notes Professor Derek de Solla Price of Yale, DS&E's consultant on the Index. "Now this longest peak in the 21-year history of the Index looks as if it is over. We can no longer optimistically claim that high technology is insulated from the general recession which affects the rest of the economy. The quarterly averages for the HTRI in 1981 were 142, 132, 141 and 125. I expect that 1982 will follow, for the first three quarters, at least, the 1980-1981 pattern, but again transposed downward. If this occurs, my best rough estimate is that in 1982, these quarterly averages will be approximately 120, 110 and, in the third quarter, will reach the norm of 100."

Obviously, the prospect of a continuing decline of the Index in 1982 is cause for concern, particularly since the HTRI seems to be much more reliable and regular in its movements than most other indicators. Such an eventuality, if it occurs, would suggest that the economic climate is inhibiting precisely the elements necessary for inducing a turnaround: the development of innovative new products and means of improving productivity—such as robotics and CAD/CAM—that are among the end products of the work of engineers and scientists. And, as Professor Price observes, the decline in demand for technical people relates directly to the health of the high technology segment of the economy on which we are most dependent for profits, growth and exports.

While worrisome, the current downward movement should be kept in perspective. Ten years previously, in 1971, the HTRI stood at 43, the lowest annual average in its history. In 1976, five years later, the Index had moved upward to only 88 for the year. This, however, was followed by five years of technical demand that were well-above average, including 1981. Currently, economists are foreseeing an economic turnaround in the latter half of 1982. If this, in fact, emerges, the downward slide of technical demand now projected, on the basis of previous HTRI performance, may be checked and reversed.

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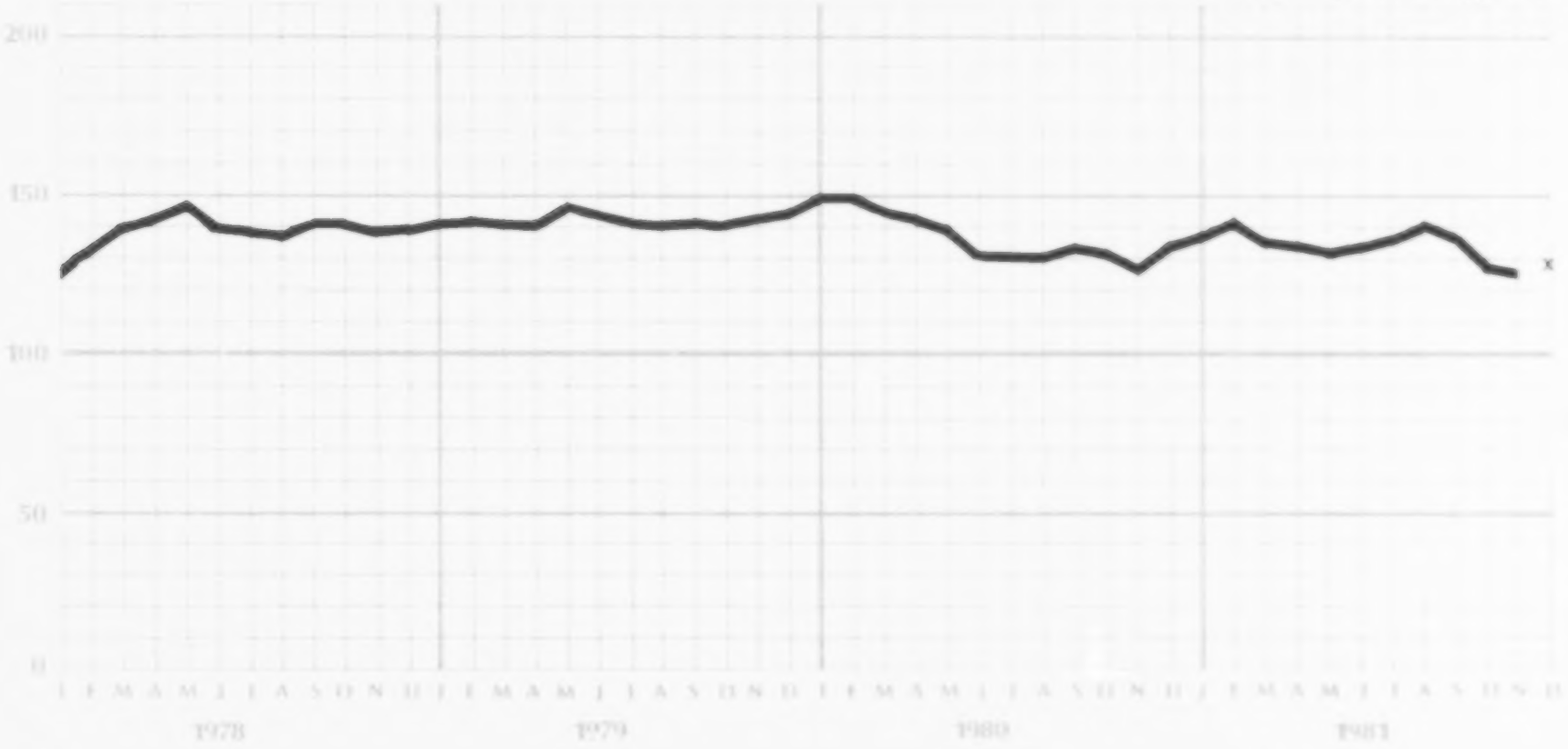
Deutsch, Shea & Evans High Technology Recruitment Index

January - February, 1982



3 Month running average
Current single month X
Baseline
1961 = 100; seasonally adjusted

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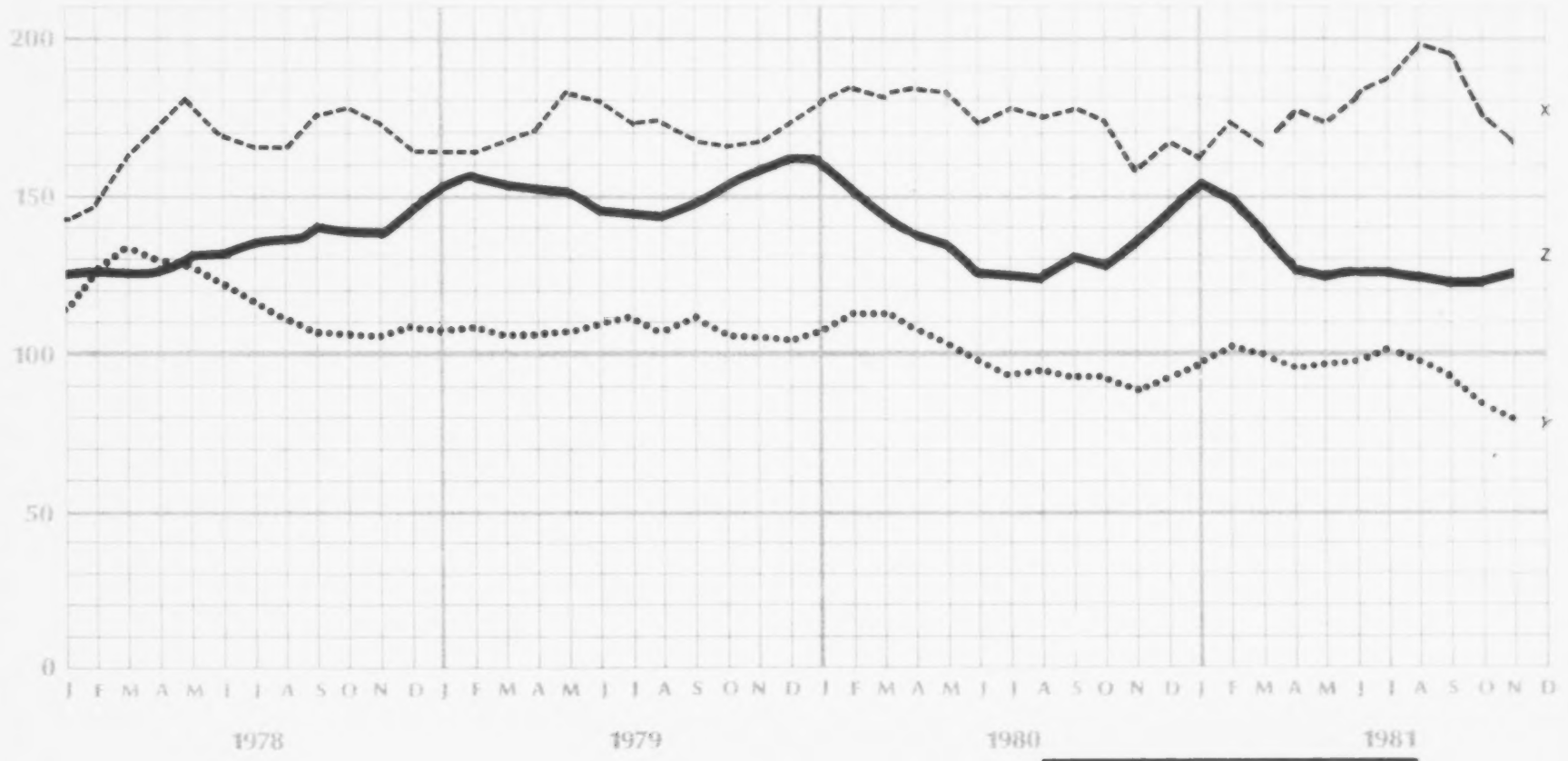
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	•••••	Y
Journal	▬▬	Z
Baseline:		

1967 = 100; seasonally adjusted

HTRI Monthly Commentary

HTRI Continues Downward In November and December

The November figure for the High Technology Recruitment Index dropped to 125, its lowest point since December 1977. We can, at this point, estimate the December Index figure to be 123. Thus, for the last quarter of 1981, demand for engineering and scientific professionals registered an average of 125. These readings suggest that technical demand is definitely on a downward path. Comparable 1980 November and December levels were 128 and 135 respectively.

The running averages for both of the newspaper subindexes included in the HTRI dropped several points in November; journal advertising, however, moved up several points.

The single month figures for December are all increases, but these may be misleading. "One must be a little cautious in interpreting the single month data for December," says Professor Derek de Solla Price, DS&E's consultant on the Index, "because of the long holiday period. While the raw data show that nearly every journal and newspaper carried less high technology recruitment advertising for December, this year's seasonally corrected figures show an increase."

He notes that HTRI has conclusively joined other economic indicators in recession behavior, implying increased reluctance by business to invest in the technical talent critical for future innovation and competitive capabilities.

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jan '81	138	98	162	155
Feb	142	101	174	151
Mar	136	100	167	140
Apr	135	97	178	129
May	132	98	173	125
Jun	135	99	181	126
Jul	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128	85	178	122
Nov	125	80	168	126
Dec	129*	79*	177*	131*

*indicates single month figures; all others are three-month running averages.

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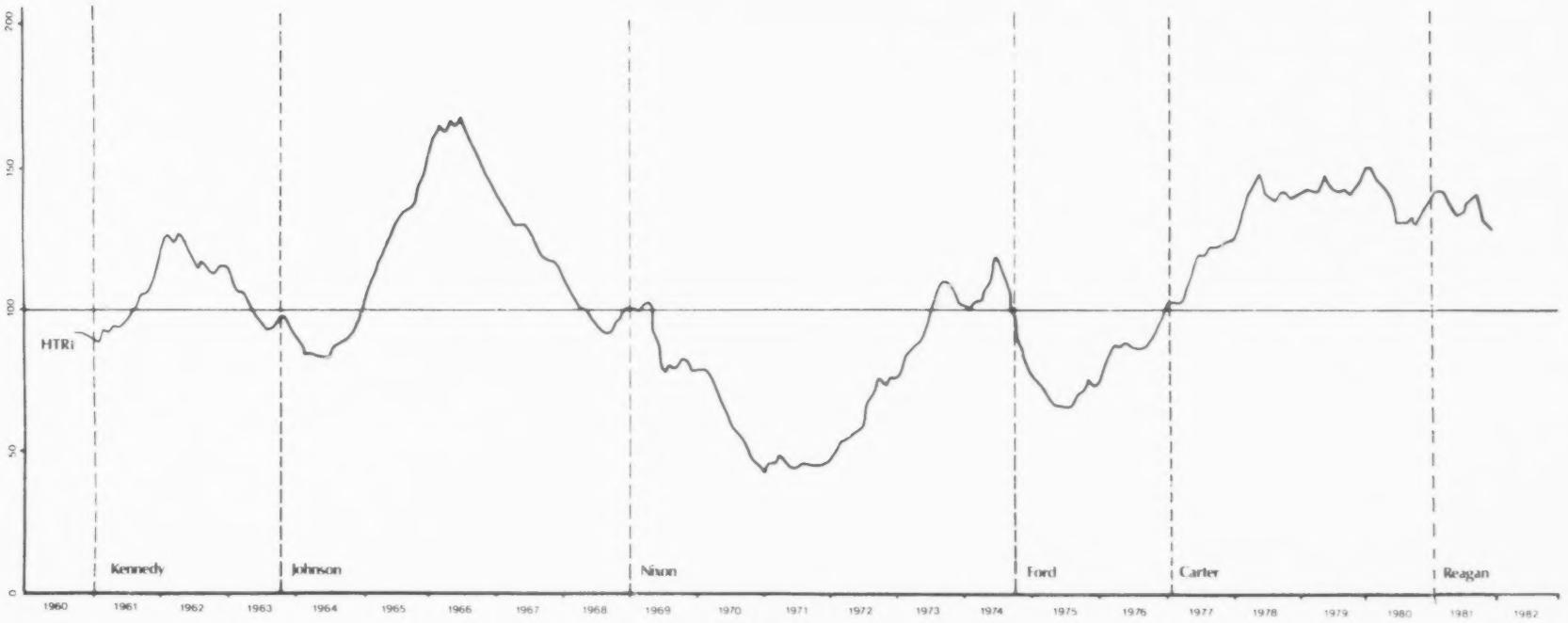
High Technology Recruitment Index



(Seasonally Adjusted; Base 1961 = 100)

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PUBLICATIONS CONTRIBUTING TO THE HTRI

Listed below are the newspapers and technical journals which provide the raw data on which the High Technology Recruitment Index is based. DS&E is indebted to these periodicals for the contributions in time and effort they make in order to support this research. They represent key industrial/scientific markets in the U.S. and major technical and scientific fields.

Newspapers

Atlanta Journal-Constitution
Baltimore Sun
Boston Globe
Chicago Tribune
Cleveland Plain Dealer
Dallas Times-Herald
Denver Post
Detroit Free Press
Detroit News
Houston Chronicle
Houston Post
Kansas City Star
Los Angeles Times
Miami Herald
Milwaukee Journal
Minneapolis Star & Tribune
New York Times
Philadelphia Inquirer
Pittsburgh Press/Post Gazette
St. Louis Globe-Democrat
St. Louis Post-Dispatch
St. Petersburg Times
San Francisco Examiner & Chronicle
San Jose Mercury News
Seattle Post-Intelligencer
Seattle Times
Washington Post

Technical Journals

Astronautics & Aeronautics
Aviation Week & Space Technology
Chemical & Engineering News
Chemical Engineering Progress
Civil Engineering
Communications of the ACM
Computer
Electronics
Engineering News Record
Mechanical Engineering
Metal Progress
Physics Today
Science
Spectrum

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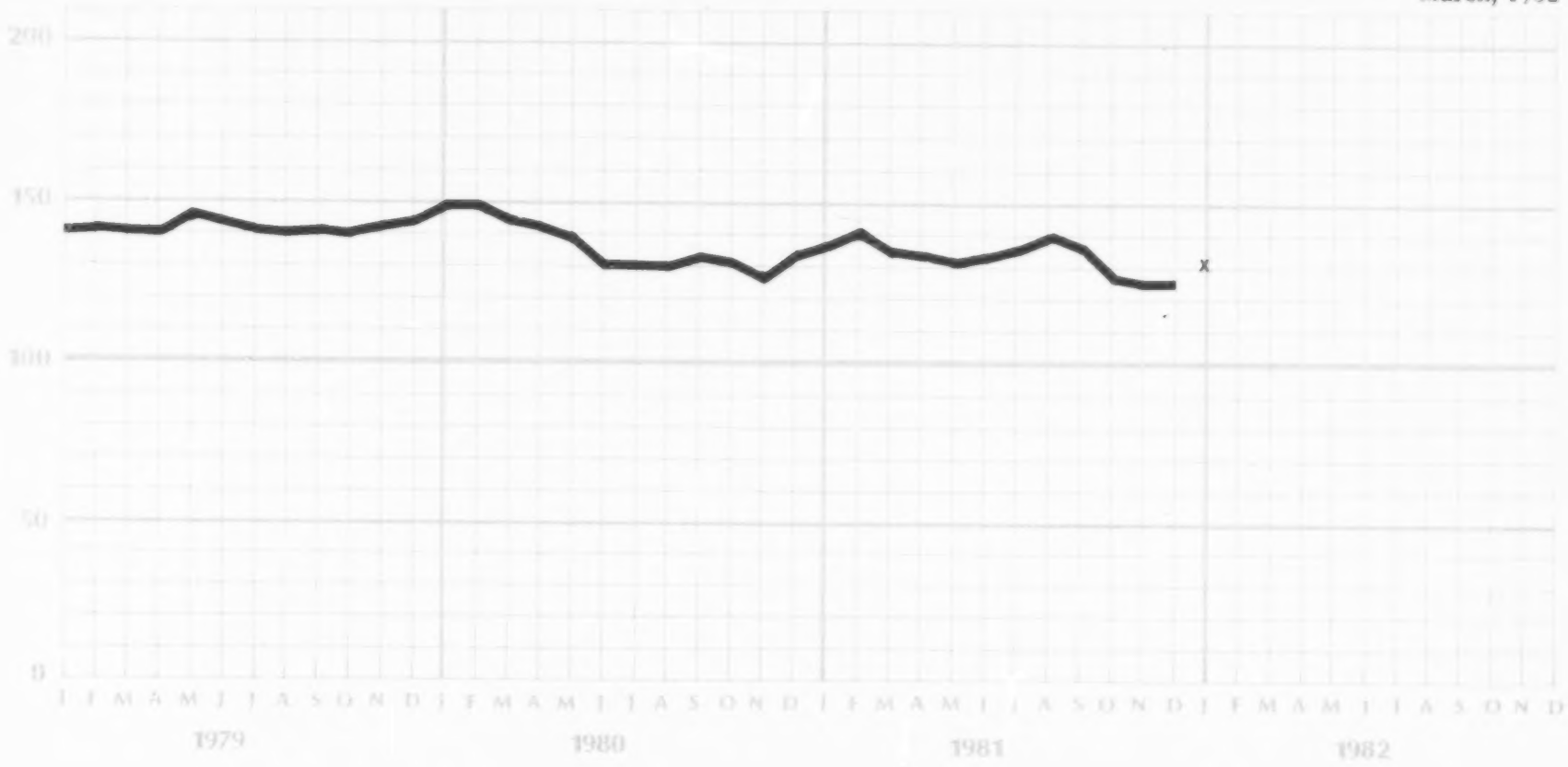
Deutsch, Shea & Evans High Technology Recruitment Index

March, 1982



3 Month running average
Current single month X
Baseline
1961 = 100; seasonally adjusted

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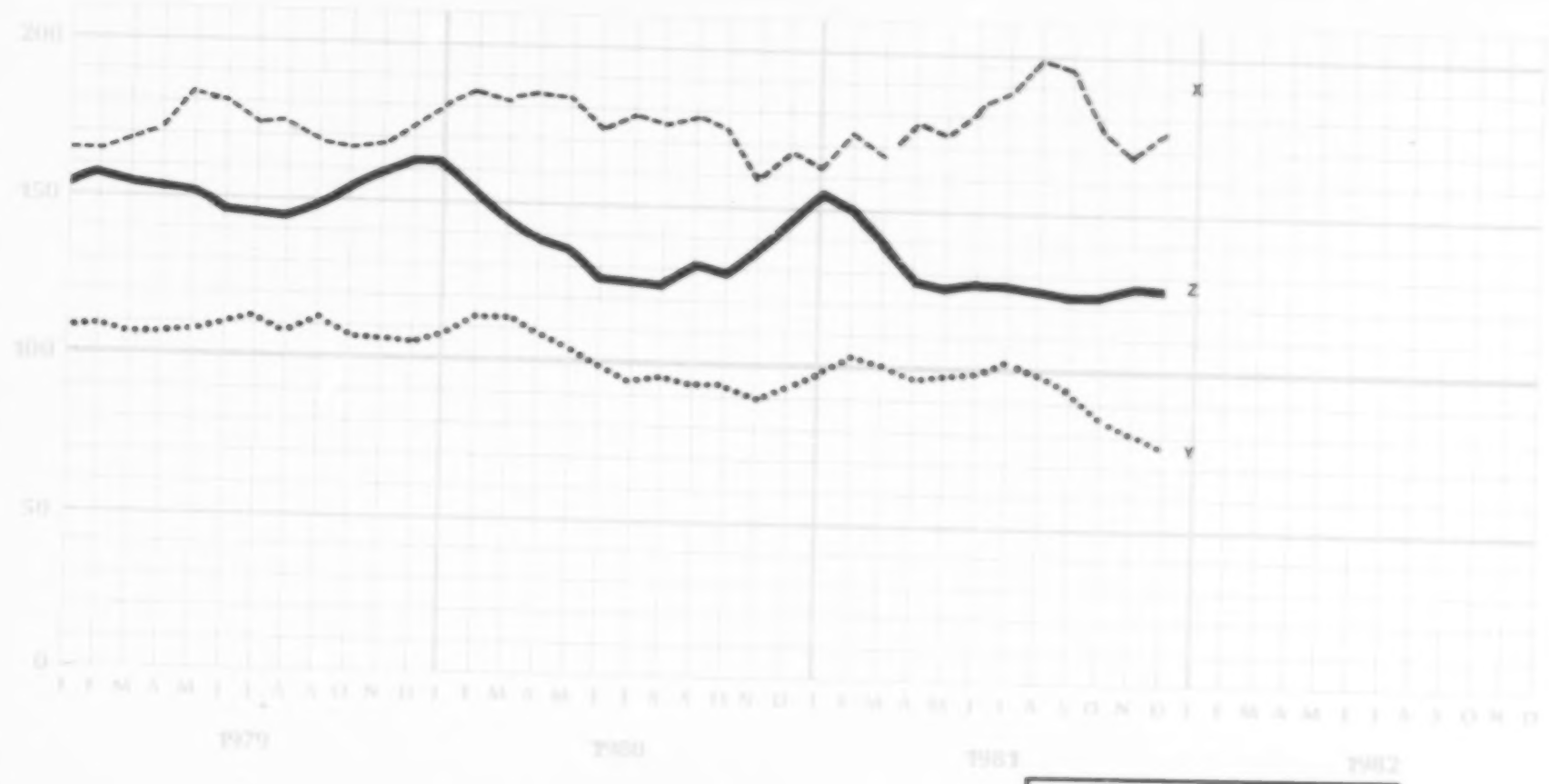
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	•••••	Y
Journal	▬▬	Z
Baseline:	———	

1961 = 100; seasonally adjusted

HTRI Monthly Commentary

HTRI Displays Slight Upward Movement But No Major Changes Yet In Sight

Higher than anticipated recruiting activity in January bumped the December Index level from a predicted 123 to an actual 126, a single point gain from the November level. This resulted from a small gain in the three-month running average for December's Newspaper Display Subindex, which—having dropped from 178 in October to 168 in November—rose again to 175. The Technical Journal Subindex, meanwhile, held steady at 126 and Classified dipped slightly.

Though the January single-month figure moved up by two points to 131, this is substantially below the 1981 single-month figure for January, which was 147. Examination of single-month subindex figures shows both Journal and Classified are very much below the previous January. Only the newspaper display figure is, at 190, well above its level of a year ago.

It is tempting to think that the long decline in technical demand may have bottomed out, which the behavior of the Journal Subindex running average might suggest. There are as yet, however, no reasonable grounds for such optimism. Other indicators, such as the Conference Board's Help Wanted Index and the unemployment rates reported by the Department of Labor —together, at this writing, with the index of leading economic indicators—all suggest the likelihood of further downward movement before a plateau is reached or a turnaround occurs.

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jul '81	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128	85	178	122
Nov	125	80	168	126
Dec	126	77	175	126
Jan '82	131*	76*	190*	127*
Feb				
Mar				
Apr				
May				
Jun				

*indicates single month figures; all others are three-month running averages.

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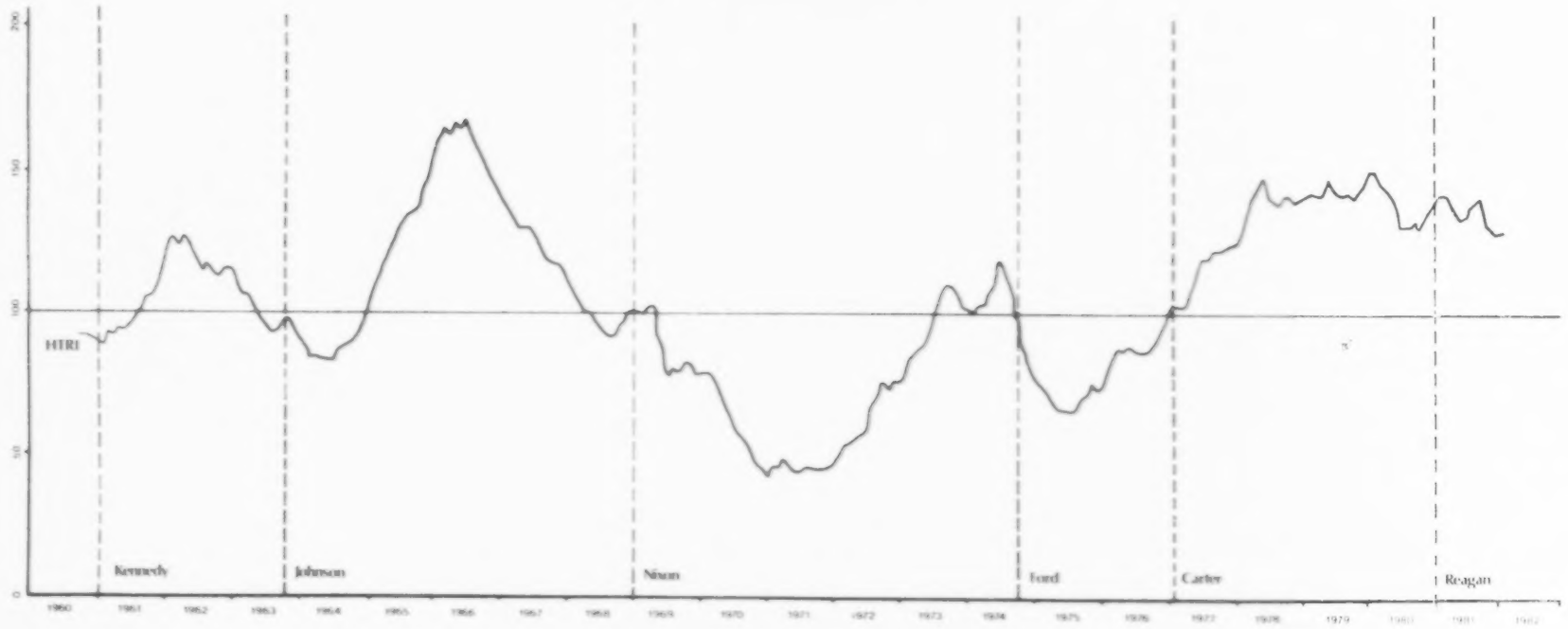
High Technology Recruitment Index



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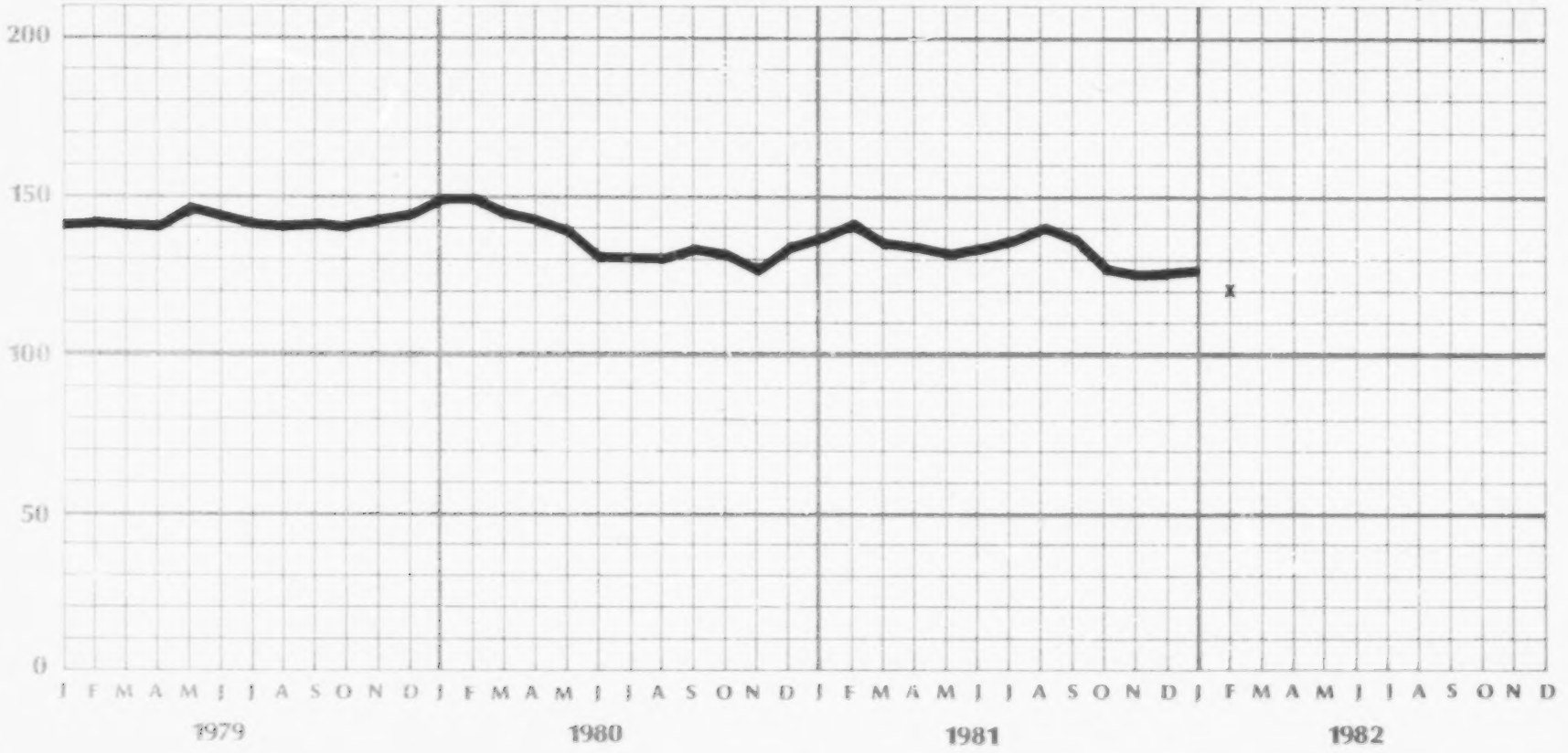
Deutsch, Shea & Evans High Technology Recruitment Index

April, 1982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J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1979
1980
1981
1982
3 Month running average
Current single month
X
Baseline
1961=100; seasonally adjusted

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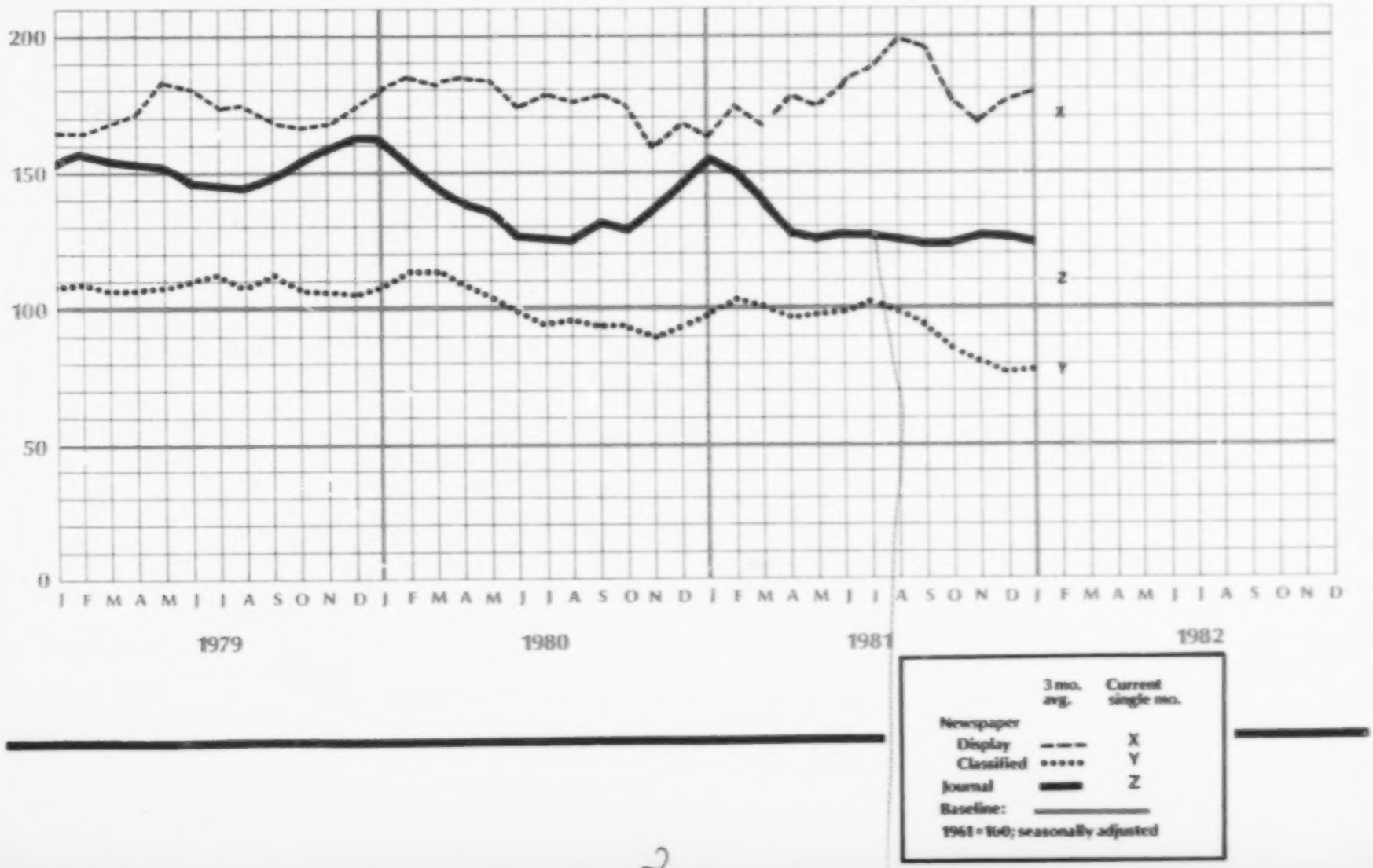
HTRI Advertising Subindexes



HTRI Monthly Commentary

Continuing Decline In Technical Demand Suggested By High Technology Recruitment Index January Level Of 127

A continuing decline in technical demand is the message provided by both the three-month running average of HTRI for January and the single-month data for February.

The January Index stands at 127, a single point above the previous month. This is the fourth consecutive month in which the High Technology Recruitment Index has hovered in the mid-120's. Rather than a plateau, however, the January figure, usually several points higher than December due to a recovery from the holiday hiatus in recruiting, is better interpreted as a sign of a further drop in the Index level.

This expectation is supported by the February single-month data. Overall, this is down 11 points from January to a level of 120. While the Classified Subindex shows a small gain, the Display Subindex sustained a substantial drop and the Journal Subindex figure of 110 is the lowest recorded since November, 1977.

This corresponds to the predictions made in the Year End HTRI report by Professor Derek de Solla Price, suggesting that 1982's first quarter would continue downward and approach the 120 level.

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jul '81	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128	85	178	122
Nov	125	80	168	126
Dec	126	77	175	126
Jan '82	127	78	179	123
Feb	120*	78*	171*	110*
Mar				
Apr				
May				
Jun				

*indicates single month figures; all others are three-month running averages.

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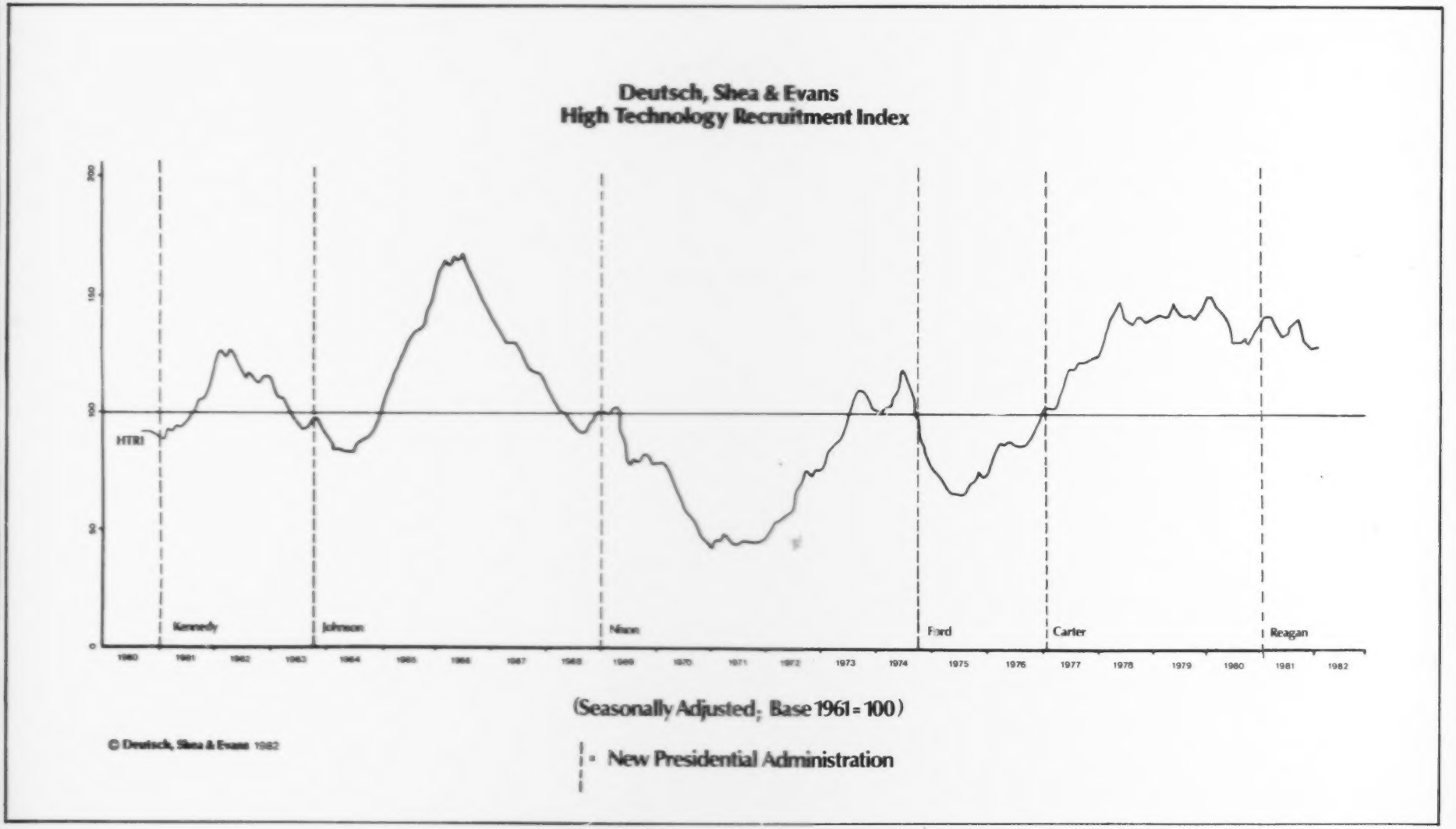
Deutsch, Shea & Evans
High Technology Recruitment Index
200
150
100
50
0
HTRI
Kennedy
Johnson
Nixon
Ford
Carter
Reagan
1960
1961
1962
1963
1964
1965
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1982
(Seasonally Adjusted; Base 1961 = 100)
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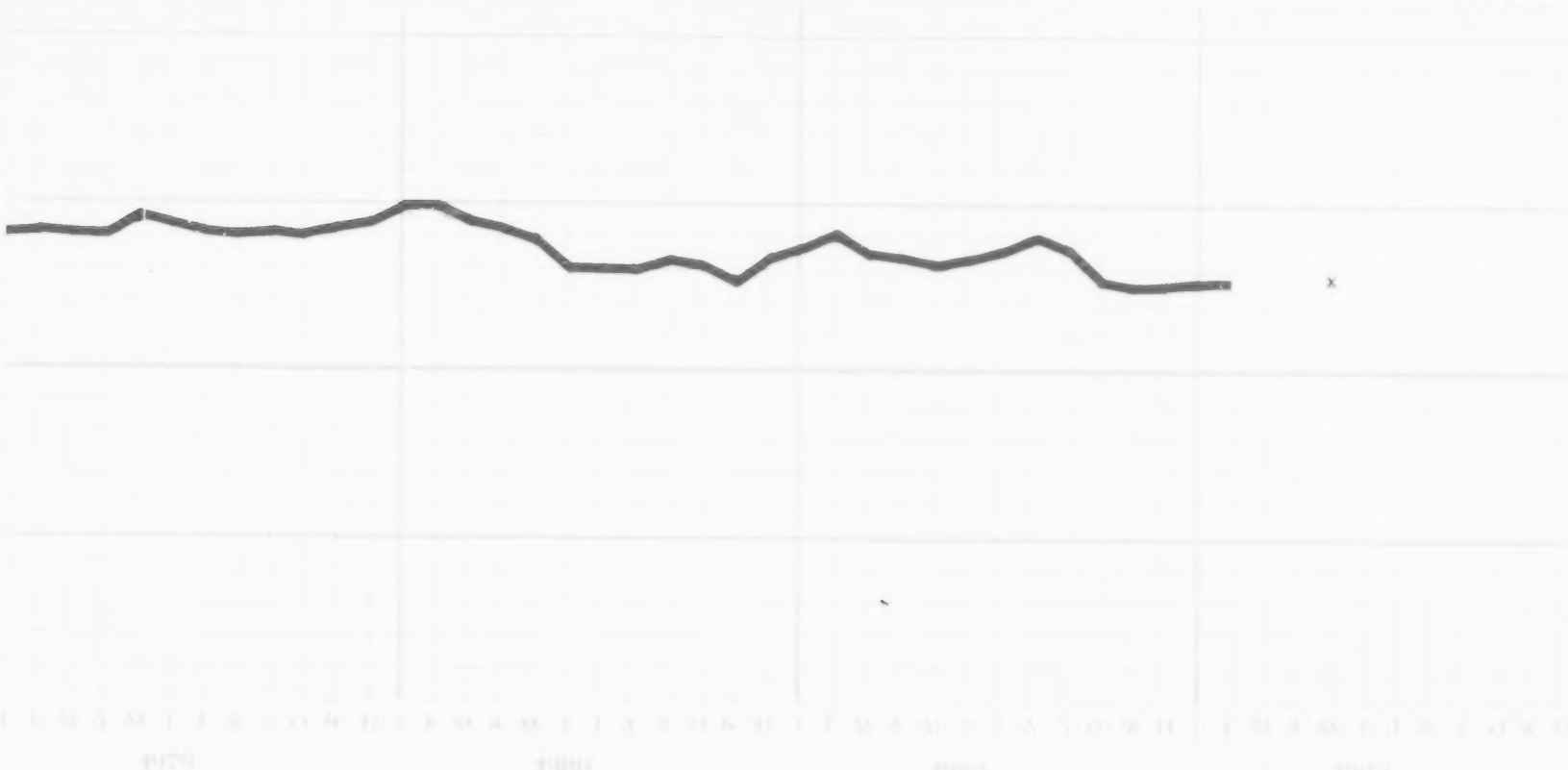
Deutsch, Shea & Evans High Technology Recruitment Index

May, 1982



3 Month running average
Current single month X
Baseline
1961 = 100; seasonally adjusted

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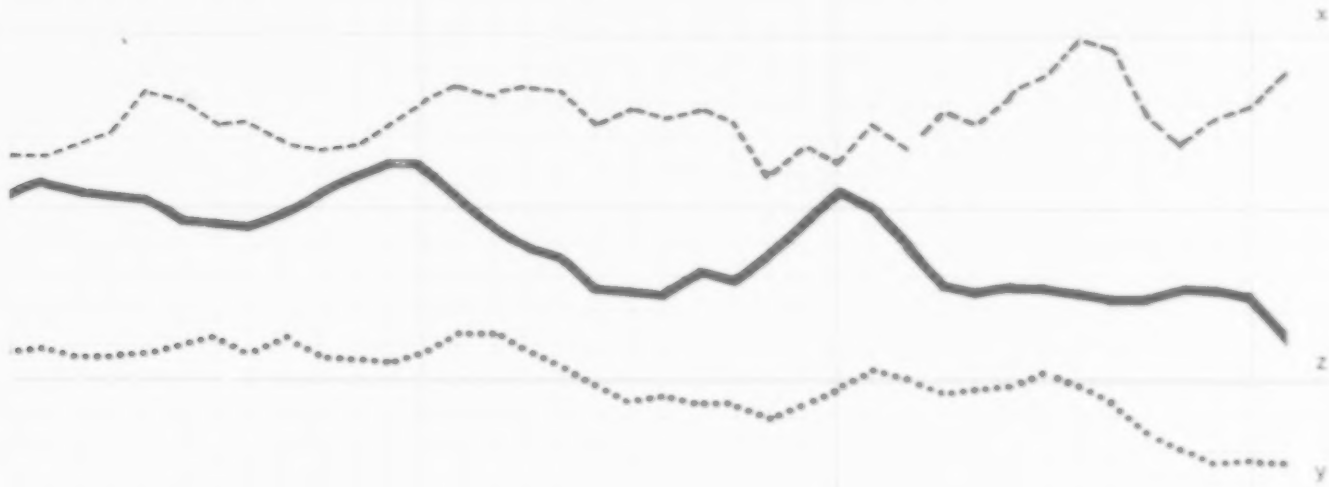
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	• • • • •	Y
Journal	▬▬	Z
Baseline:		

1961 = 100; seasonally adjusted

HTRI Monthly Commentary

No Movement in Technical Demand for February; High Technology Recruitment Index Stands at 127

The data for March indicate no change in the three-month running average of the HTRI—it stands as before at 127. This result is, however, very deceptive, for, alas, the figures are vitiated by a technical glitch. Our Index is derived as a mean of three subindexes. Two of them for journal and newspaper classified ads have behaved normally and show that the recent declines in high tech industry advertising are continuing.

The Journal Subindex, having begun a decline last December, going from 126 to 123, now falls to 114 for the February three-month running average. Its single month figure for March is 104, so all indications are that next month the reading will be down again to probably not much over the 100 mark. The Newspaper Classified Subindex, which usually lags Journal behavior by about six months, remains stable. It dropped a single point in running average and should be almost stable again next month.

The Newspaper Display Subindex presents a problem. During the past four years, this indicator has shown enormous instability, oscillating rather capriciously between values of 160 to 200. This time, the single month value has shot up from 171 last month to 206 for March, bringing the three-month running average from 179 up to 189 for February.

The trouble seems to be an increasing practice of special supplements on high technology recruitment that are run by newspapers and inflate the score for that month; and this occurred in March. In the absence of other special recruitment supplements, we suppose this subindex will return to a single month level of 170 in April. In that case, the March three-month running average will be 182, and the HTRI will decline next month about six points to a level of about 121.

HTRI

	HTRI	Newspaper Classified Subindex	Newspaper Display Subindex	Technical Journal Subindex
Jul '81	137	101	185	125
Aug	141	99	199	124
Sep	137	93	196	123
Oct	128	85	178	122
Nov	125	80	168	126
Dec	126	77	175	126
Jan '82	127	78	179	123
Feb	127	77	189	114
Mar	129*	76*	206*	104*
Apr				
May				
Jun				

*indicates single month figures; all others are three-month running averages.

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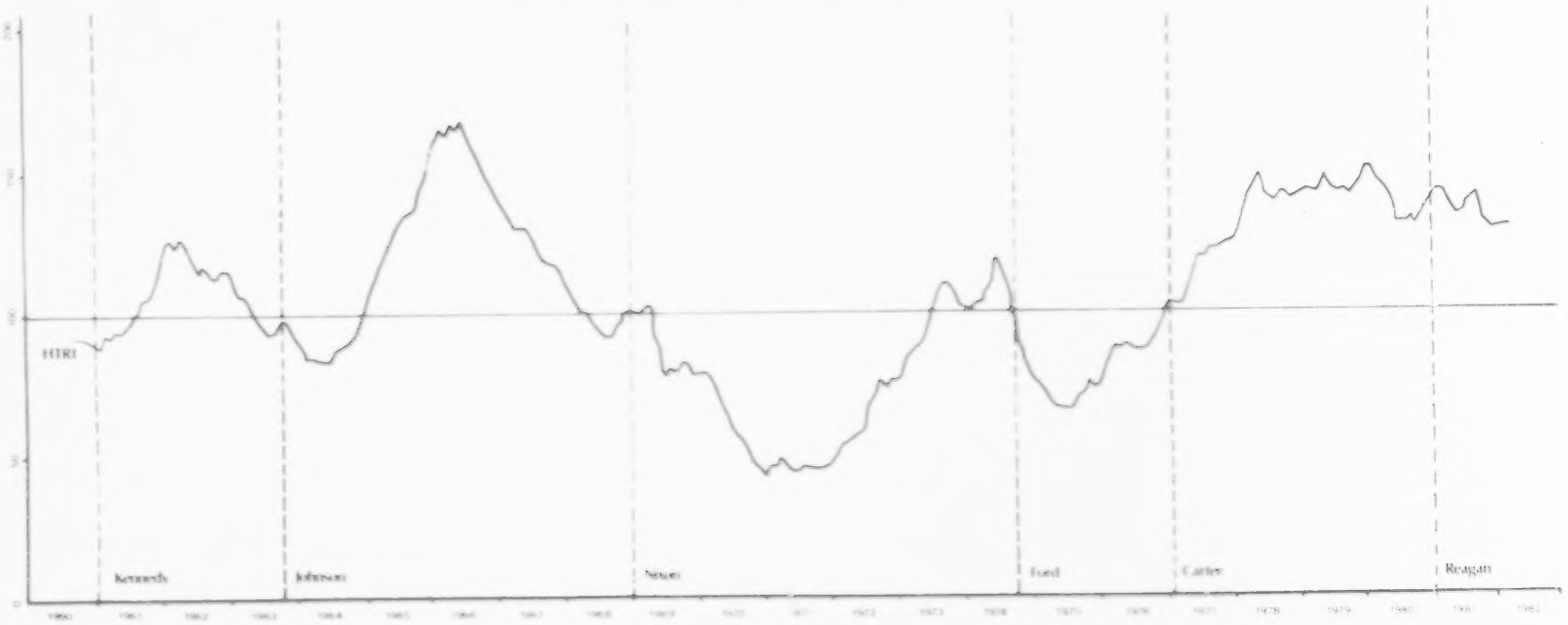
High Technology Recruitment Index



(Seasonally Adjusted; Base 1961 = 100)

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DS&E

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49 EAST 53RD STREET
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TEL (212) 688-0500

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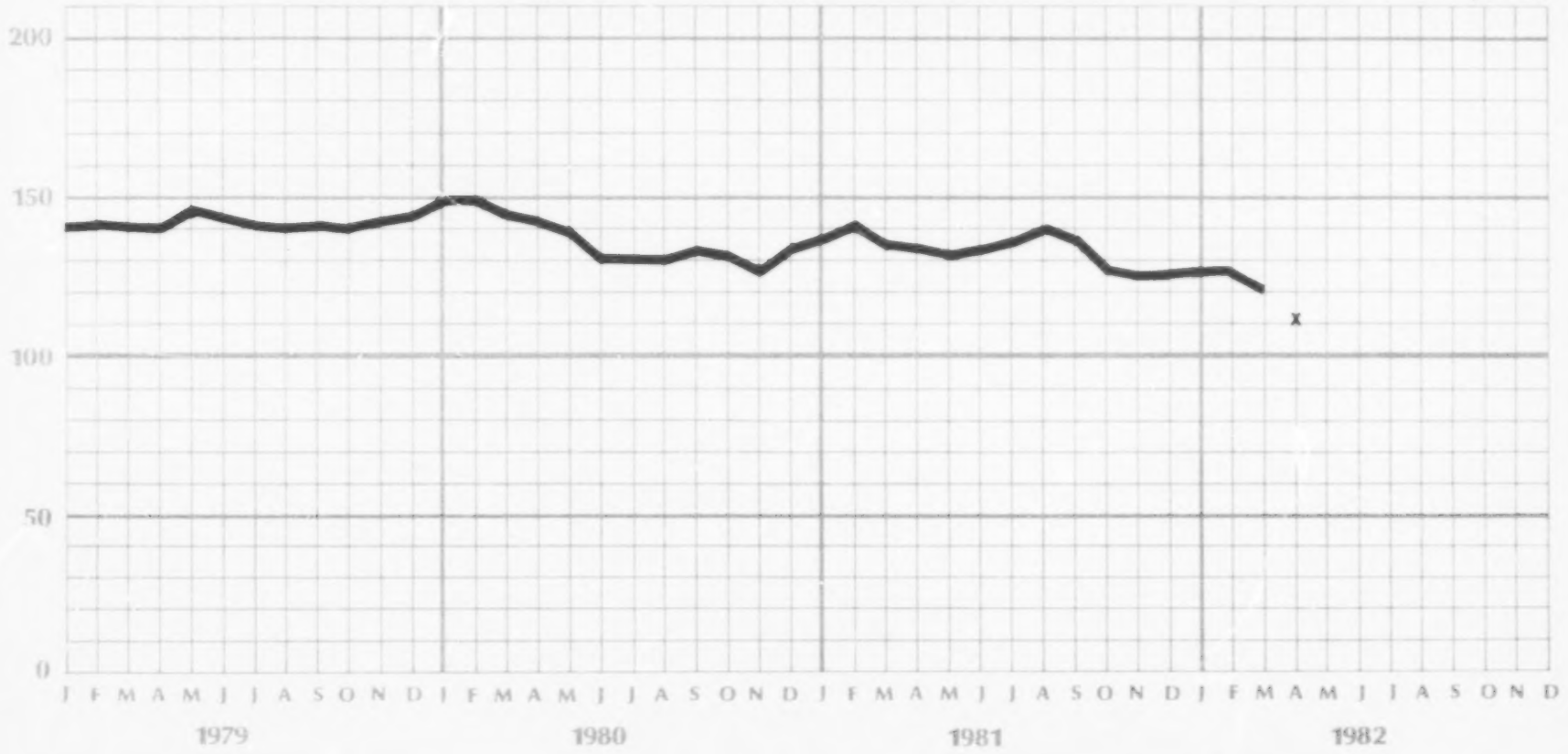
June, 1982


200
150
100
50
0
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1979
1980
1981
1982
3 Month running average
Current single month
X
Baseline
1961=100; seasonally adjusted

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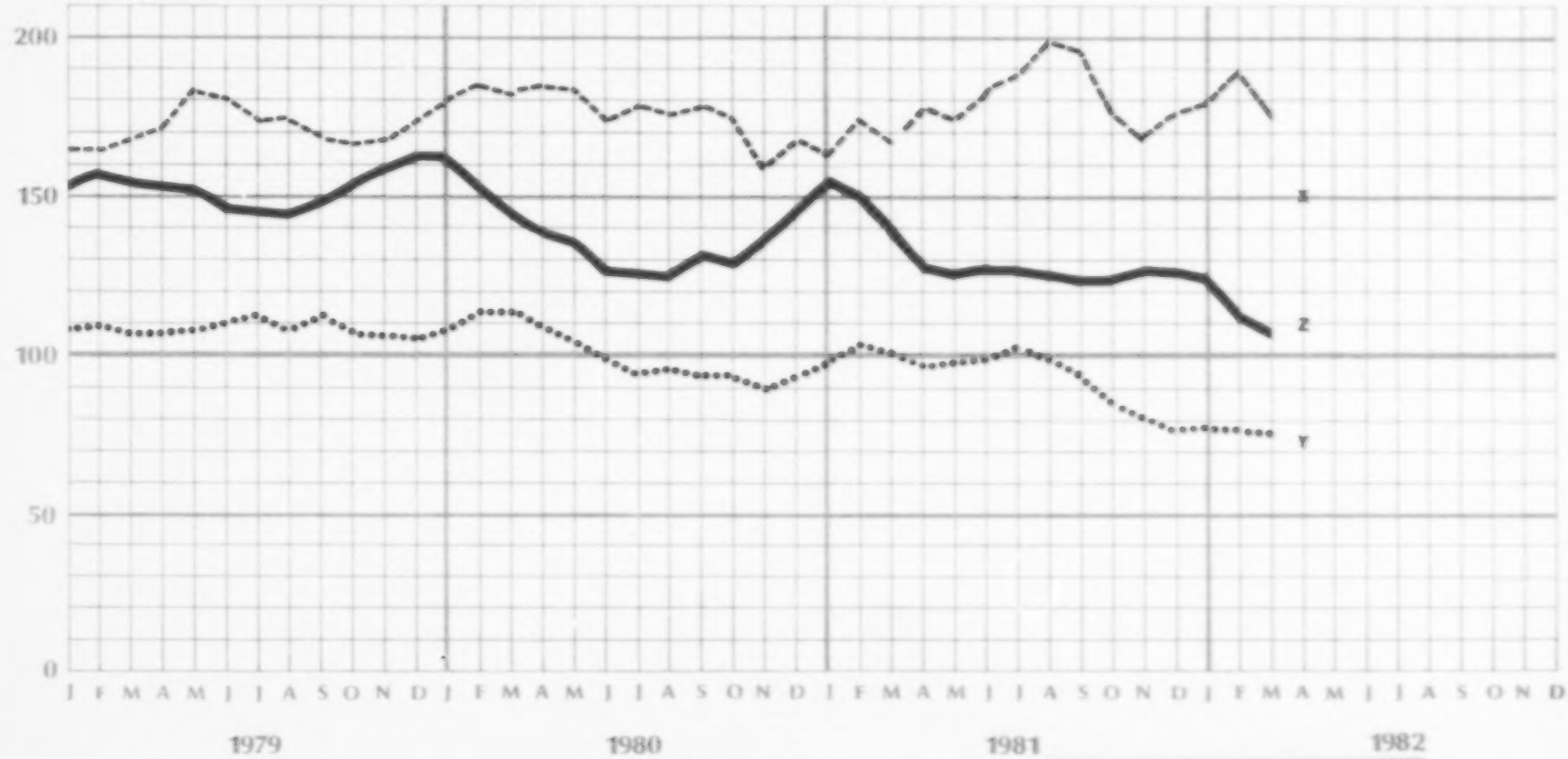
HTRI Advertising Subindexes



	3 mo. avg.	Current single mo.
Newspaper		
Display	– – –	X
Classified	•••••	Y
Journal	▬▬	Z
Baseline:	———	

1961 = 100; seasonally adjusted

HTRI Monthly Commentary

HTRI Data Show Continuing Decline in Demand for Technical Professionals

April data show that the general decline of the High Technology Recruitment Index continues. Both the Journal and Newspaper Classified Subindexes indicate continued weakness. HTRI has fallen from a single month value of 129 for March to 111 for April. The three-month running average, our most reliable indicator, drops from a February level of 127 to 120 for March.

The running average for the Journal Subindex also continues its steady fall. It was at 123 in January, 114 in February and is now 108 for March. Similarly, the Classified Subindex is now falling at the rate of a point a month and now stands at 76 for March. The Display Subindex, whose erratic behavior has been traced to the growing practice by newspapers of issuing special career supplements heavily oriented to display ads, has a running average —minus supplements—of 176, down from 189.

"The Journal advertising is now back to 1977 levels and the Classified to 1976 levels. We must, therefore, conclude," says Professor Price, "that the evidence is in for this being the last year of the boom cycle for technical recruitment which began in January, 1977 and was maintained for about six years."

This is the last issue of the HTRI Monthly Report. Lack of support for this publication has made it uneconomical for DS&E to continue it in its present form.

HTRI

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Dec	126	77	175	126
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Feb	127	77	189	114
Mar	120	76	176	108
Apr	111*	73*	150*	109*
May				
Jun				

*indicates single month figures; all others are three-month running averages.

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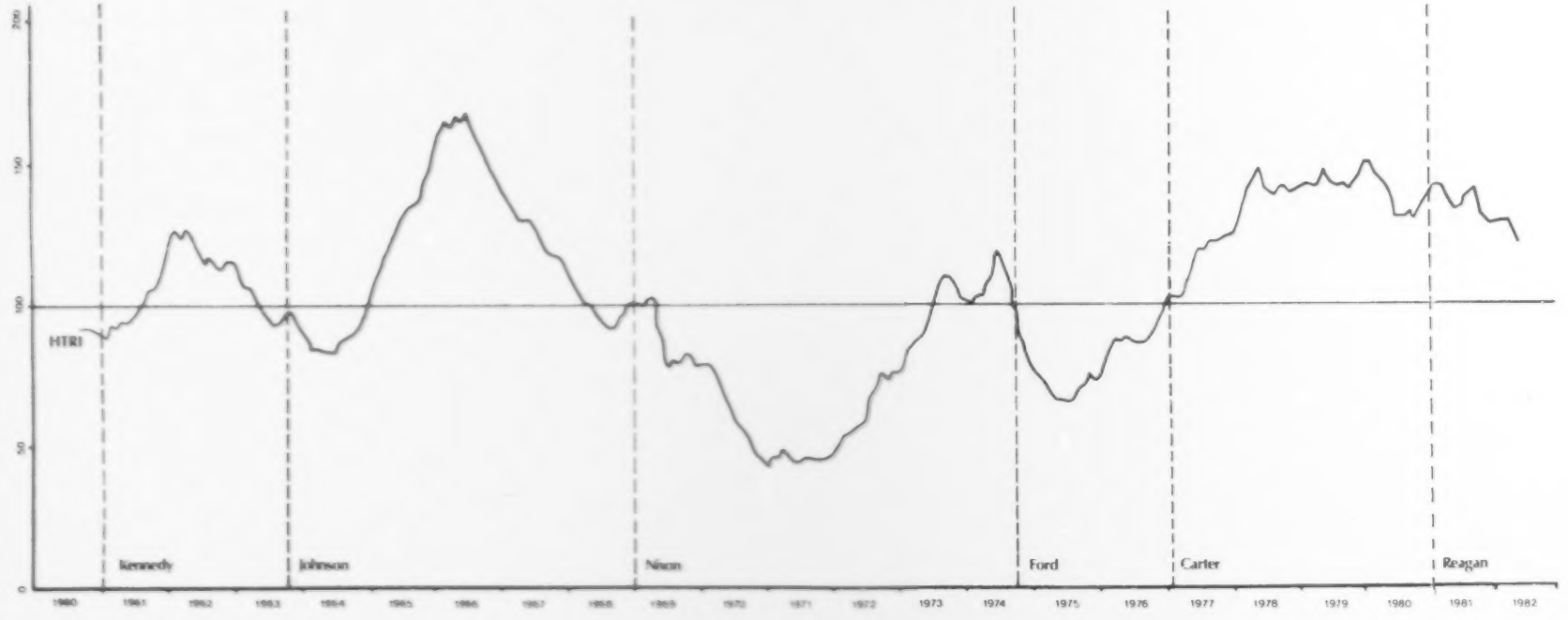

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